

## **Strategy to Initiate a Deicing Task Group**

### **January 31, 2000**

#### **Background:**

The Environmental Management Council (EMC) had a Road Salt Committee that coordinated an effort to gather and report information on road salt usage on State roads within Monroe County. They published a report in 1987 entitled "The Use of Road Deicing Salt on State Roads in Monroe County". The basis of that report was State-audited data for all towns from 1980/81 through 1985/86, and for 11 towns in 1986/87. The EMC also gathered and tabulated road salt usage data through 1992/93. In May of 1995, EMC prepared a draft document entitled The Use of Road Deicing Salt on State Roads in Monroe County: An Update. As part of this update, a literature review was conducted of the environmental and economic impacts of deicing salt. The environmental impacts of road salt include damage to vegetation and soil, as well as the degradation of water quality.

One of the primary local water quality problems associated with road salt, is its impact on the natural overturn of the water in Irondequoit Bay. High salt levels cause the lower portions of the water column to be more dense than the water above, thus impeding the Bay's ability to mix completely. The result of incomplete turnover is oxygen depletion in the deep portions of the Bay. A voluntary reduction in road salt usage by the municipalities surrounding the Bay from 76,000 tons in 1969-70 to 43,000 tons by 1974-1985 has for the most part corrected this problem. However, in 1984, the Bay failed to completely overturn because of a substantial usage of road salt during the spring turnover.

In 1996, Monroe County entered into an intermunicipal agreement with the Town of Brighton that called for, among other things, the Town to continue to participate in the County's Sensible Salting Program, and for the Town and County to support the concept of sensible salting. It called for the Town and County to review current educational materials and make changes or develop materials as necessary. In bi-annual meetings held between County and Town staff since 1996, road salt and other deicing issues have continued to be of interest. In addition, the issue of road salting has been included in subsequent water quality intermunicipal agreements negotiated with towns.

In January of 1997, representatives from EMC, the Monroe County Department of Health, the Monroe County Department of Transportation, the New York State Department of Transportation, and the Town of Brighton met to discuss a transition of road salt tracking responsibilities from the EMC to the Health Department. At that meeting it was agreed that after completion of the EMC salt data report, the continuation of a road salt task group would be established as part of the Monroe County Water Quality Coordinating Committee. The County WQCC would solicit representatives to the task group. The task group would be coordinated by the Water Quality Planning Bureau of the Health Department, and staffed by several departments. The new salt effort would have the tracking of the usage of road salt as one component with work to be coordinated by the WQCC Task Group.

In September of 1997 the final Rochester Embayment Remedial Action Plan was published that included a recommended action for monitoring of road salt usage. It recommended that a task group should work with the County Department of

Transportation to develop and conduct an annual survey of road salt usage by the municipalities and the New York State Department of Transportation on state roads in the urbanized part of the Rochester Embayment Watershed. Once the data is collected, it would be analyzed and a brief report compiled. The RAP recommended that the following parameters be monitored: 1) Total tons of road salt used by each municipality and the NYSDOT on state roads per year and 2) tons of road salt used per lane mile by each municipality and the NYSDOT on state roads per year.

In 1999, Mark Gregor from the City of Rochester contacted the Health Department to inquire about any concerns about dumping of snow into the Genesee River. Another meeting in early 1999 with John Dergosits from the Canal Corporation also raised the issue of dumping snow into the Canal (which requires a permit from the Canal Corporation). At this point, it is not clear what all of the issues may be related to snow dumping.

Since the mid 1990's, a few new road de-icing products have come on the market including Ice Ban and Magic, that are additives to road salt. The Environmental Health Laboratory has conducted some chemical analysis of Ice Ban and found it to have high BOD and phosphorus levels. Tom Pearson of the NYSDEC in Avon contacted Margy Peet in early 1999 to note his concerns about usage of some liquid deicing being tested by the NYSDOT on Route 390 in Livingston County. He noted that Region 8 NYSDEC has initiated some research on road de-icing procedures and possible impacts on water quality.

### **Proposed Strategy to Create a Deicing Task Group:**

#### **1. Define Task Group Purpose**

- A. A primary purpose of the task group should be as recommended in the RAP, to develop and conduct an annual survey of road salt usage by the municipalities and the New York State Department of Transportation on state roads in the urbanized part of the Rochester Embayment Watershed. This would include summarized data on 1) Total tons of road salt used by each municipality and the NYSDOT on state roads per year and 2) tons of road salt used per lane mile by each municipality and the NYSDOT on state roads per year. The task group would also need to decide whether and how to collect additional data on usage of additives such as ice ban and magic, and how and whether to collect additional data on all roads instead of just State roads.
- B. Before initiating the deicing material use data, the group may wish to define the scope of the current problem to answer the following questions: What are the recent analytical results (if any) on salt concentrations in Irondequoit Bay, wells, or other waters? What local ecological impacts have recently been observed that are associated with the elevated salt levels? If this task group purpose is agreed to, it may be appropriate to assign this task to a smaller group of members with water quality knowledge. This should include a NYSDEC representative. A deadline for completion of such a report should be set and for review of the report by the Highway Superintendent's Association.
- C. A decision would need to be made about publishing the road salt data collected earlier by the Environmental Management Council. Options include summarizing

road salt usage data beginning with the 1999-2000 season, go back to the 1995-96 season, or go all the way back to the 93-94 season.

- D. If agreed to by all members, and adequate staffing was available, another purpose could be to research and report on the possible water quality impacts of dumping snow in the River, Canal or creeks.
  - E. If agreed to by all members, and adequate staffing was available, another purpose could be to research the water quality impacts of the use of road salt “treatments” such as Ice Ban and Magic, and recommend actions by Monroe County and municipal officials in the use of such treatments.
  - F. If agreed to by all members, and adequate staffing was available, another purpose could be to review road salt usage guidelines, handling and storage procedures, and recommend changes, if necessary. Deicing usage educational materials could also be reviewed and revised, and a deicing usage education strategy developed.
  - G. Research deicing application equipment options and benefits.
  - H. Define the scope of the current problem.
2. **Define Task Group Membership:** The members of the most recent Environmental Management Council Road Salt Committee included Richard Elliott, and Margy Peet, Monroe County Health; John DeSeyn, Gregory Meyer, Richard Burton, Charlie Knauf Environmental Health Laboratory; Richard Saltrelli, City of Rochester; Susanne Quarterman, EMC; Robert White, Frank Dolan, Monroe County DOT; Lynn Pease, New York State DOT; and Tom Low and Tim Keef, Town of Brighton.

Using this information, together with new suggestions, the following recommendations for membership are made:

- A. Core Members: Critical members to conduct the primary work of the task group (see section 1A) would be representatives from:
  - Monroe County DOT
  - NYSDOT
  - A representative of at least one large and one small town
  - A representative from the City of Rochester
  - An EMC Representative to assist with transition
  - A representative of the Monroe County Department of Health, Division of Environmental Health
  - A staff person from the Department of Health, Division of Environmental Health, Bureau of Water Quality Planning
  - A representative of the Environmental Health Laboratory
  - A representative of the Water Quality Management Advisory Committee (David Belaskas and Richard Perrin have indicated an interest in serving)
  - A representative of the Water Quality Coordinating Committee
  - A representative from the Monroe County Highway Superintendent’s Association
- B. Other Members: If other tasks (See Section 1B, C, D), additional representatives would also be helpful as follow:
  - A representative of NYSDEC in Avon
  - A representative of the NYS Canal Corporation

3. **Define Task Group Relationship to other organizations:** Since this is a relatively technical issue, it is recommended that this task group report organizationally to the Monroe County Water Quality Coordinating Committee. The Task Group should regularly update the Water Quality Management Advisory Committee and seek advice from the WQMAC regarding education and publicity issues.
4. **Timeline:** It is feasible for a road salt task group to become active by January of 2001. The following steps needed prior to the first meeting are:
  - A. Get WQCC Endorsement of Strategy February, 2000
  - B. Get WQMAC Endorsement of Strategy February, 2000
  - C. Research information on the impact of road salt on water quality Spring 2000
  - D. Prepare draft report Summer/Fall 2000
  - E. Recruit Members Winter 2000
  - F. Set First Meeting January 2001